

CLAIMS

What is claimed is:

- 5 1. A controller for a machine, comprising:
 a machine mountable base comprising a motor protection device; and
 a modular control unit replaceably mountable to the machine mountable base.
- 10 2. The controller of claim 1, wherein the motor protection device comprises a
 short-circuit protective device.
3. The controller of claim 2, wherein the short-circuit protective device
 comprises an instantaneous trip.
- 15 4. The controller of claim 2, wherein the short-circuit protective device
 comprises a magnetic circuit breaker.
5. The controller of claim 1, wherein the motor protection device comprises a
 disconnect device.
- 20 6. The controller of claim 5, wherein the disconnect device comprises a local
 lockout.
7. The controller of claim 1, wherein the modular control unit comprises an
 overload protection device and a contactor.
- 25 8. The controller of claim 1, wherein the modular control unit comprises a
 programmable electronic overload.

9. The controller of claim 1, wherein the modular control unit comprises an electromagnetic contactor.

5 10. The controller of claim 1, wherein the modular control unit comprises a soft start machine controller.

11. The controller of claim 1, wherein the modular control unit comprises a variable frequency machine drive.

10 12. The controller of claim 1, wherein the modular control unit comprises a motor connection terminal.

13. The controller of claim 1, wherein the machine mountable base comprises a network terminal.

15 14. The controller of claim 1, wherein the machine mountable base comprises at least one sensor terminal.

20 15. The controller of claim 1, wherein the machine mountable base comprises at least one actuator terminal.

25 16. A motor controller, comprising:
a motor mountable base comprising a short-circuit tripping disconnect; and
a replaceable control unit removably coupled to the motor mountable base.

17. The motor controller of claim 16, wherein the short-circuit tripping disconnect comprises a magnetically tripping disconnect.

18. The motor controller of claim 16, wherein the short-circuit tripping disconnect comprises a disconnect lockout.

5 19. The motor controller of claim 16, wherein the motor mountable base comprises at least one communication terminal.

20. The motor controller of claim 19, wherein the at least one communication terminal comprises a machine network terminal adapter to facilitate networking of a plurality of machine components.

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21. The motor controller of claim 16, wherein the replaceable control unit comprises an adjustable overload and a contactor.

15 22. The motor controller of claim 16, wherein the replaceable control unit comprises a soft start motor controller.

23. The motor controller of claim 16, wherein the replaceable control unit comprises a variable frequency motor drive.

20 24. The motor controller of claim 16, wherein the replaceable control unit comprises at least one monitoring device.

25 25. The motor controller of claim 16, wherein the replaceable control unit comprises at least one diagnostic device.

26. The motor controller of claim 16, wherein the replaceable control unit comprises at least one manual control mechanism.

27. A controller for a machine system, comprising:

a modular control unit replaceably mountable to an on-machine motor protection base, wherein the modular control unit comprises at least one motor control device operable
5 with at least one motor protection device of the on-machine motor protection base.

28. The controller of claim 27, comprising the on-machine motor protection base.

10 29. The controller of claim 27, wherein the modular control unit is selected from a group consisting of a soft start motor controller, a variable frequency motor drive, and an adjustable overload protection device.

15 30. The controller of claim 27, wherein the modular control unit comprises a machine network terminal adapter to facilitate networking of a plurality of components of the machine system.

31. A controller for a machine system, comprising:

an on-machine base comprising a machine protection device; and

20 a selectable control unit replaceably mountable to the on-machine base, wherein the on-machine base and the selectable control unit are cooperative to provide desired on-machine controllability.

25 32. The controller of claim 31, wherein the machine protection device comprises a magnetically tripping disconnect.

33. The controller of claim 31, wherein the selectable control unit is selected from a group consisting of a soft start machine controller, a variable frequency machine drive, and an overload protection device.

5 34. A controller for a system of distributed machines, comprising:
a machine mountable base, comprising:
a short-circuit protective device; and
a disconnect device; and
a modular control unit replaceably mountable to the machine mountable base,
10 wherein the modular control unit comprises control circuitry selected for a desired machine.

35. A system, comprising:
a plurality of machines;
a modular base mounted on a machine of the plurality of machines, wherein the
15 modular base comprises a machine protection device for the machine; and
a modular control unit mounted on the modular base, wherein at least one of the
modular base or the modular control unit is selectively replaceable to provide a desired
controllability of the machine via a cooperative operability between the modular base and
the modular control unit.

20 36. The system of claim 35, wherein the plurality of machines are distributed in
a network.

25 37. The system of claim 36, comprising a remote interface coupled to the
network.

38. The system of claim 36, wherein the plurality of machines comprise at least
two different machine systems.

39. The system of claim 35, comprising at least one additional pair of the modular base and the modular control unit mounted on another one of the plurality of machines.

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40. The system of claim 35, comprising:

a second modular base mounted on a second machine of the plurality of machines and having another machine protection device for the second machine; and

10 a second modular control unit mounted on the second modular base, wherein at least one of the second modular base or the second modular control unit is selectively different from a corresponding one of the modular base and module control unit to provide a different controllability of the second machine relative to the desired controllability of the first machine.

15 41. The system of claim 35, wherein the machine protection device comprises a short-circuit protection device.

42. The system of claim 35, wherein the machine protection device comprises a disconnect device.

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43. The system of claim 35, wherein the modular control unit is selected from a group consisting of a soft start motor controller, a variable frequency motor drive, and a motor controller having an overload device and a contactor.

25 44. The system of claim 35, wherein the plurality of machines comprise a material handling system.

45. The system of claim 35, wherein the plurality of machines comprise a mining system.

5 46. The system of claim 35, wherein the plurality of machines comprise a petrochemical system.

47. The system of claim 35, wherein the plurality of machines comprise a food processing system.

10 48. The system of claim 35, wherein the plurality of machines comprise a beverage processing system.

49. The system of claim 35, wherein the plurality of machines comprise an automotive assembly system.

15 50. The system of claim 35, wherein the plurality of machines comprise a baggage handling system.

20 51. A machine, comprising:
a motor; and
a motor controller mounted to the motor, comprising:
a modular base comprising motor protection circuitry;
a module control unit comprising motor control circuitry cooperatively
operable with the motor protection circuitry, wherein at least one of the modular
25 base and the modular control unit is selectively replaceable.